DOCUMENT RESUME

ED 482 896 FL 027 866

AUTHOR	Loucky, John Paul
TITLE	Enhancing Japanese College Students' English Reading and Vocabulary Skills by Using CALL Innovations.
PUB DATE	2003-00-00
NOTE	16p.; In: Bulletin of Seinan Jogakuin College, Number 49, Jan 2003.
AVAILABLE FROM	For full text: http://els.nii.ac.jp/pdfout.php3?1083006281.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	*Bilingual Education; Computer Assisted Instruction; Computer Software; *Computer Uses in Education; *Dictionaries; English (Second Language); Foreign Countries; Higher Education; Reading Instruction; *Reading Skills; Teaching Methods; Vocabulary Development
IDENTIFIERS	*Bilingual Dictionaries; Japan

ABSTRACT

This article summarizes software which can help to enhance both local and specific reading skills (often done through what is known as intensive reading) and global or general reading skills (known as extensive reading). Although the use of computerized bilingual dictionaries (CBDs) and translation websites of various types does not appear to result in faster acquisition and better retention and productive activation of new target language vocabulary than what is possible for students using only bilingual book dictionaries, these findings have been limited to several hundred students studied so far. This article asserts that more research should be done on the beneficial language learning effects of using various computer assisted language learning reading software along with CBDs, especially when these are used more systematically to enhance specific essential lexical steps as recommended by the "Depth of Lexical Processing Scale." (Contains 29 references.) (SM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 482 896

Enhancing Japanese College Students' English Reading and Vocabulary Skills by Using CALL Innovations

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
John P. Loucky
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

John Paul LOUCKY

西南女学院短期大学研究紀要第49号抜刷 2003. 1

BEST COPY AVAILABLE

Enhancing Japanese College Students' English Reading and Vocabulary Skills by Using CALL Innovations

John Paul Loucky

Abstract

This article summarizes software presented at CALL SIG 2002 which can help to enhance both local or specific reading skills (often done through what is known as "Intensive Reading"), and global or general reading skills (known as "Extensive Reading"). Although the use of computerized bilingual dictionaries (CBDs) and translation websites of various types does appear to result in faster acquisition and better retention and productive activation of new target language vocabulary than what is possible for students using only bilingual book dictionaries, these findings have been limited to several hundred students studied so far. More research should be done on the beneficial language learning effects of using various CALL reading software along with CBDs, especially when these are used more systematically to enhance the following essential lexical processing steps, as recommended by this writer's "Depth of Lexical Processing Scale" below (Table A).

1. Introduction:

Indeed Waring (2001, p. 16) is correct in asserting that "if we are to construct vocabulary knowledge scales of any kind, then we should do so with a particular framework in mind." The "Vocabulary Learning Taxonomy" or "Depth of Lexical Processing Scale" given below is the framework in the mind of this researcher, which is based on increasing evidence being accumulated from research reviews, student VLS surveys and interviews, and classroom instruction. It sees vocabulary as continua representing different aspects of word knowledge being developed at times simultaneously, but sometimes separately. Such a cyclical model of second language lexical processing and learning could help to improve EFL vocabulary research by generating a more accurate picture of actual L2 lexical development, the major aspects of which may be seen here.

Table A: Taxonomy of Lexical Processing Steps, Skills and Strategies: 10 Part Depth of Lexical Processing Scale (10 points each x 10=100%= Fully Processed Target Language Vocabulary. Use as a Cyclical Continuum to Help Teach and Assess Depth of Lexical Processing.)

STEP	1	2	3	4	5	6	7	8	9	10
TLV	Assess	Access	Archive	Analyze	Anchor	Associate	Activate	Anticipate	Reassess /Posttest	Relearn Remeet
1										Repeat
2										Recycle Again
3										Build Automaticity & LT Retention

Brief Background Review:

Each of the steps, skills and strategies within this system of L2 lexical development stands in need of further research, and may be best maximized under the following conditions: 1) If we can learn how to more effectively apply the many useful functions of modern computerized technology, along with 2) a more systematic, associative memory network (Semantic Field Keyword Approach, designed and tested by Crow, 1986; and Quigley, 1986), coupled with 3) a more socially interactive, communicative approach to helping students learn to use more effective vocabulary learning strategies (See Oxford, 1992; Oxford & Chamot, 1990; and Nation, 2001).

Lest we misrepresent the nature of L2 lexicon development, each aspect of lexical development needs to be studied and analyzed more carefully, combining the use of various assessment instruments which can help us get more views of the heart and mind of language learners in the daunting task of foreign language vocabulary acquisition. Several instruments have been tested and developed by this researcher, which seem to be needed in order to render a better individual learner profile, as well as more accurate diagnosis of their reading needs, necessary for more appropriate prescription of effective instructional methods and materials in second language reading and vocabulary development. Besides the Dual Assessment Vocabulary Evaluator described here briefly, these include a systematic VLS Taxonomy, an EAP/ESP Vocabulary Learning Questionnaire, and an Individual Lexical Learning Interview Checklist based on this "Depth of Lexical Processing Scale" to see how deeply learners are actually processing new target terms, and where CBDs may be more effectively employed to aid in their lexical development.

In addition, TASA's American testing program (Estes & Estes, 1989) includes many types of language assessment instruments, which can be compared with these. They include 1) a TextSense (sic) assessment of learners' ability to write summaries of either narrative or prose; 2) a Depth of Reading Power check on learners' level of reading comprehension; 3) a Depth of Word Meaning check of students' level of receptive vocabulary understanding; and 4) an English language proficiency assessment instrument called the MACaulitis II. This latter test evaluates all four communication skills as well as vocabulary separately.

Use and Evaluation of Computerized Reading Programs:

The following does not purport to be a detailed research study, but rather a brief overview and analysis of some of the most linguistically and technologically beneficial components of a few well-designed language learning programs and Websites. More such reviews should be done and compiled into a data bank of software and Website evaluation reviews for teachers, students, and researchers.

Both vocabulary and comprehension components should be evaluated, as well as chances given for more integrated language skill development. More balanced and holistic language development can be encouraged either by giving students more individual computerized interaction through multimedia formats, or else by providing social language learning experiences in which students are asked to apply new learning more productively. The following are some well-designed reading programs, with comments.

1. Rikai.com for Vocabulary and Comprehension Development—Using the above VLS Taxonomy:

1) **Assess** unknown words, either on screen, or from a printed copy highlighting them.
2) **Access** them instantly by hover and click function revealing an immediate list of translations.
3) **Archive** them for later review, possible to do in four ways:
   a) English to Japanese
   b) Japanese to English
   c) English to Spanish
   d) Chinese to English
4) **Analyze** probable meanings in context, in three learning steps:
   a) Orally, first with teacher-directed, whole-class instruction, then
   b) Socially, second with a partner, and finally
   c) Individually, third time afterwards for further practice on other chosen or assigned articles, depending on their interest, or number in class.
5) **Associate** new TL vocabulary into related groups, by

a) Semantic Field Keyword Groups, using Crow & Quigley's (1985) approach, or
b) Syntactically, by grammatical parts of speech, idioms, common collocations, etc.
c) Topically or thematically, by news category or by issue or article.

6) **Anchor** new TL vocabulary into both learner's short- and long-term memory by
a) Use of Mnemonic Devices, such as words having similar sounds, forms or meanings in L1/L2, and
b) Use of associative memory networks, Semantic Field Keywords and related groups of words having similar meanings,
c) Use of contrast with antonyms, or opposite pairs,
d) Fix new words into long-term memory by reciting, reading or reviewing TL words that have been put into new contexts by one of the following active language tasks:

7) **Activate** new TL vocabulary by using new words in a brief oral or written summary retelling of the news article's main points. Also include a personal reaction or statement of learner's own impressions. Also allow students to write their own Creative Vocabulary Stories, using the same TL vocabulary words in new original contexts, writing either realistic or imaginary stories using the same 10-20 target words.

8) **Anticipate** — Print and make Cloze Exercies, omitting new TL vocabulary for students to guess and fill in, as they build their comprehension and predictive skills.

9) **Reassess** — words learned by Matching Quizzes made with words learned from news articles.

10) **Relearn, Revise and Recycle** — any words each student has missed to develop better **Automaticity of Response** and long-term memory **Retention** of these more advanced L2 vocabulary words.

This software designer's site also has brilliant language learning helps for each of these languages: Japanese, English, Chinese or Spanish. Its helps for learning to read Japanese include:

a) **Word Search Histories**--or lists of words clicked and automatically archived for any learner to review online or to print and recycle later.
b) Rikai Web-linking Instructions
c) Feedback Portal
d) List of over 30 very helpful language learning and Rikai user links
e) **Kanji Study Word Cards**—which can be set and chosen from several lists:

1) by Word List Kanji, 2) from Heisig, 3) from Henshall, 4) from Father DeRoo, 5) by Stroke Count, 6) Filtered by most common 500, 100, 2000, or without any filter applied.

Card Settings—front or back can be set to be shown in Kana, English, English and Kana, Kanji only, Kana and Kanji, or with Compound Words. Teachers can guide their learners to use any of these six learning options as they reach that level of proficiency. Such a wide variety of possible screen presentation display greatly facilitates many different levels of language learners and types of study.

Learned Kanji—is always filtered out by this program, saving time by helping learners to focus only on yet unknown kanji characters, compounds and vocabulary.

Kanji Maps—use a memorable combination of related kanji characters, occurring in the same Semantic Field to help stimulate and reinforce retention of new TL vocabulary. The central character may be inputted, becoming a central Keyword focus.

*If the developer could add an **English Semantic Keyword Word Map or Web Organizer,** this would become the best English vocabulary learning tool available for more advanced levels of study, including that of English for Academic or Specific Purposes.*

That is because this Kanji Map is fully interactive, cross-referencing Japanese words with related kanji compounds. It also simulates native Japanese automaticity by doing rapid searches on any single kanji typed in, and automatically creates a **Kanji Word Web** of semantically related kanji compounds, thereby broadening a learner's vocabulary.

A program of computer-assisted, task-based language learning applied to the use of a particular website program like Rikai.com could include these practical steps:

1) Students are assigned or choose a news article from those listed on the Webpage;
2) They study the article following the vocabulary

learning steps outlined in the above taxonomy, copying and pasting the article when read into Word or another word-processing program;

3) Run a Text-to-Speech program, such as any of those found in Table E, to build their FL reading speed, reading and listening comprehension and TL semantic and syntactical skills, thereby reinforcing their long-term retention of new word forms and meanings.
4) Write a "Personal Summary and Reaction" to their news article;
5) Learn to check their own L2 writing samples by using Grammar and Spelling Checkers;
6) Save and Send their personally corrected "Story Retellings" or "News Reactions" by email, or Print and hand in a copy to the teacher.
7) Teacher checks these writing samples either manually or electronically, returning them with comments. He may also archive them in Class/Individual Profiles" for later grading, publication, group discussion or speech presentation.

II. Reading Skill Trainer, available cheaply from Eichosha on PC floppy discs and developed by Kanazawa Institute of Technology, stresses what is known as "Sense Group Reading." Its navigation guide offers 153 stories at 3 levels of difficulty, by following two paths for reading comprehension development. These options are either a) by paragraph, with comprehension questions following, or b) by full text, questions following. Alternating between these two textual presentations would probably give students the best chance to develop both global or general as well as specific skills for closer reading of SL text more thoroughly with deeper cognitive processing of both new TL vocabulary and overall textual meaning.

A. Educational and Technical Advantages over Silent Text Reading:

Advantages for students of using this program include 1) Paced Reading, which can be adjusted by or for language learners; 2) Phrase Focus with blue lettering, which helps learners to concentrate better on trying to understand the meaning of text in full phrases, rather than reading only word by word; 3) Text Display may be chosen as either a) Full Text, or b) Phrase Level only, preventing any possible regression. While the former type of display may help slower readers who need to check back to reconfirm their guessing about meaning, the latter means of display will enhance language learners' memory, reading speed, and overall comprehension. Another advantage is 4) Repetition—Since the text repeats on the screen for as long as a learner needs it, and display speed can be adjusted, it meets any learner's individual need in terms of reading speed. The Reading Pacer speed can be set anywhere from 60 to 300 words per minute. 5) Stories may also be chosen based on a student's own individual interest and self-determined level. After comprehension questions are completed, the computer calculates both percent accurate (*seitou ritsu*), and also shows students or teachers which questions they got right or wrong (*seigohyou*), as well as the time it took for them to answer (*shoyou jiken*).

B. Software Program Evaluation:

All in all this is truly a neat, inexpensive and very versatile reading program, at just the right lower intermediate level for most Japanese high school or college students to learn effectively and enjoyably from. Authoring software should definitely be made available, to extend the benefits of this well-designed language program to all levels of students and to all kinds of reading teachers worldwide.

Individual Student Profiles: are saved on floppy discs, which are extremely helpful for teachers, since these can show both them and their students: 1) their overall reading growth each study time, 2) which challenge texts and tests they have worked on, and 3) printable total reading statistics (*ruiseki*) for each learner, including a) # of story(ies) read, b) # times read and total time spent on it, c) at what speed/s it was read, d) total score and item analysis, and e) date and time readings were done.

III. Other Reading Software Briefly Evaluated:

1) *ASK Training CDs*—is a Japanese product for building English reading and vocabulary skills.

ASK (1999) is an English reading speed and comprehension builder made with Macromedia. Its set of four bilingual Hybrid CDs (with free sample also available) includes: 1) Culture and Society, 2) Science and Health, 3) Business and Economics, and 4)

TOEIC 600, TOEFL 500 and EIKEN 2 Study CD. These vocabulary and idioms "Super Speed-reading Training CDs use Computer Adaptive Testing to evaluate and archive each student's time on task, date, total words read, reading speed, and percentage of comprehension questions answered correctly. Test scores include item analysis, with all answers graphed relative to a target of 100 WPM reading speed and relative to college entrance examinees' average score of 65%. One of the most important features of this product in terms of language learning is its bilingual side-by-side text display option (*taikyaku*), as well as optional bilingual glosses for difficult words or idioms, at just a click away. Explanations of test questions and idiomatic expressions are also given in Japanese. Various story topics may be chosen by learners, and training hints are tailored to help learners overcome their individual weaknesses.

2) *Building Reading Comprehension* (1993)--by Queue, & Clearview, Inc. is for Mac Platform only. Nevertheless it has eight large file folders on its main directory. These cover many essential skills for reading development, including 1) ADD Reading Skills, 2) Reading for Enrichment, 3) Reading Skills Register, 4) Step by Step Reading, 5) The World of Reading, and Reading Comprehension 6) in Liberal Arts, 7) and in U.S. Geography and History. When one sees the large number of well-written articles it includes, it is no wonder that this became one of Queue's most popular educational software programs for reading comprehension. It also provides an interactive learning environment featuring immediate feedback, help screens, and student scoring. If Text to Speech functions were available it would be even more beneficial for language learners, as they need the added aural input, which further aids them in developing better listening, intonation and phrase reading speed skills.

3) *Hartley Reading Skills Collection*—is a set of four CDs covering early intermediate reading skills called: 1) Read to Imagine, 2) Read for Meaning, 3) Read to Think, and 4) Reading All Around You. It would be appropriate for elementary school native readers ages 8-12, or for intermediate level ESL/EFL students, which the majority of Japanese high school and college students seem to be. These lessons follow IRA standards, in which student's individual progress is tracked and evaluated. Each CD has over 20 lessons, including comprehension and vocabulary development sections. Parallel to the above CD numbers these are some lessons included on each: 1) Character development and literary techniques, 2) General word analysis and study skills, 3) Same as #2, plus use of affixes and base words, and 4) Same as #2, plus author's purpose and use of cause and effect. This Hartley Skills Collection CD-ROM Library includes a Calculator and Notebook in its menu of tools. A Help and printable Score menu are also included, the latter showing a student's current score, unit, # questions answered vs. correct, with a weighted score (#correct/#tries). Clickable buttons include a mike to record their own voice, a movie camera to see an animation, and earphones to hear a script again.

4) *Vocabulary Drill*--Developed by S. Wasson at Drexel University (PA). Available from Intellimation Library for the Macintosh, this program was designed to accompany chapters 16-25 of McKay's text, *A History of the Western World* (Houghton Mifflin). It provides ten exercises in which students may get either immediate correction of answers or else receive context clues, a better way to encourage the development of this essential reading skill. There are separate sections in each exercise for various parts of speech. Since the 300 words included in this program are used in a wide range of academic fields, it is useful with or without the McKay history text. Common core vocabulary should be studied by students needing to read academic texts or technical journals at higher levels of ability, as shown by Mizoguchi, et al.'s (1995) Recommended EAP Vocabulary List.

5) *The World and I World Folktales: A 15 Year Collection* (2001) is an excellent CD with hundreds of HTML linked pages that connect to their broad interdisciplinary curriculum resource and magazine. It includes about 100 stories from 40 countries or cultural areas. If these could be put online to be automatically glossed, archived and accessed by Rikai.com, that would be the ideal way for any language learner to study them, as they give many insights about various countries' histories, cultures, folk literature, science and the arts. Put out by a magazine by the same name, this CD links users to its

Homepage, educational programs and archives.

A similar hybrid CD of folktales with adventure games is *Reading Search: In Search of the Lost Folktales*, by Great Wave Software. Stories are printable, but adventures very hard to solve.

6) *World Watch*—put out by eWorld, these CDs combine the development of listening, reading and vocabulary skills. It only works on Japanese systems that still read Windows 95. No updates could be found yet by this researcher.

7) *Wordcraft and Crow's Semantic Field Keywords* — on Mac Hypercard. Available from the author, were part of a dissertation (Loucky, 1996, Appendix C, pp. 307-321) comparing the use of CAI reading and vocabulary materials with Audio-Lingual and Sustained Silent Reading methods. Moore's *Shinbun, Shinbun* (Seibido) materials were also used and are highly recommended for lower intermediate level students, having Japanese explanations.

Evaluation and Recommendations:

With all of its tremendous interactive, online functions, Rikai.com is by far the most sophisticated and well-designed language learning program for Japanese online today, and best of all, it's free! As the author's dissertation first recommended (Loucky, 1996, Ch. 5, Recommendations, pp. 160-213), a specific plan for CAI/CALL integrated four-skills development should be followed to help learners maximize their vocabulary development, especially for FL learners who lack sufficient exposure to the target language. It stressed having a systematic and intentional program of vocabulary development that would seek to integrate the development of all four communication skills in a computer lab setting, using CALL software wherever possible along with in-class writing and discussion exercises. A major focus educationally and linguistically should be to stress the development and use of all four communication skills in a well-integrated manner, "so that both knowledge about language and ability to actually communicate can develop together in a balanced manner" (Loucky, 1996, pp. 208-209).

Many other general recommendations and solid language learning principles for improving vocabulary teaching and learning can be found in Nation (1990; 1994; 2001), Hatch & Brown, (1997); and in Loucky (1994, 1996, 1997, 2002). Some more specific recommendations for CALL-based language learning may be found in Table E, entitled "CALL's Goal: To Use Integrated Four Skills Software More Effectively and Enjoyably to Increase English Language Skills." By using both proven portable devices, multimedia software and well-designed, interactive websites, language learning can be made much more interesting and well-balanced. Better development of each communication skill facilitated by using innovative technology as well as more emphasis on active production and interactive task-based language learning should be stressed.

The vast potential of CALL and Web-based instruction for both native and foreign language development must be more widely recognized and used by language teachers as much as possible to improve instruction, motivation and learning. While these software evaluation examples may be considered by some to be too small for broad generalizations, study can easily be done on various software and for computerized dictionaries of different language pairs to determine if in fact these particular findings and recommendations hold true for SL/FL learners widely regardless of their language backgrounds, majors or proficiency. From this study it does appear that both learners' initial computer and TL vocabulary proficiency levels seem to be factors that would strongly affect how much more effectively they could use various computerized dictionaries and software made available to them. Therefore these factors need to be more carefully considered and developed, as well as the specific features and functions of each type of CALL software or dictionary, and how they can be used more effectively to help with individual student's vocabulary and language learning needs, as well as how to best integrate them into whole classroom instruction. Free website translation sites (in Table C), for example, can easily be used to enhance the teaching of mass media or second language reading and writing courses.

Conclusions and Recommendations for CALL Reading and Vocabulary Development:

One may also draw the following conclusions, based on reviewing ten types of reading software and thirty different types of CBDs available in Japan, as to the relative advantages and disadvantages of using electronic dictionaries and reading software.

Based on previous studies of CBD use at three Japanese colleges (Loucky, 2002 a, b, & c) several conclusions were drawn, which apply directly to this whole area of reading software versus textbooks only:

1) Firstly, CBDs and by natural logical extension CALL reading software appear to be *more both more technologically expedient* (providing more rapid access to unknown word meanings), and *more cognitively efficient* in terms of helping to speed up lexical processing of recording of the L2 mental lexicon.

2) Secondly, computer and engineering majors seem to be able to learn to use these computerized dictionaries and software more rapidly for more effective word accessing than English majors, at least for those

Table B: Relative Advantages and Disadvantages of Electronic Dictionaries and Reading Software

Advantages:	**Disadvantages:**
Light, compact, portable	Often more expensive than books
Many volumes together	can break or wear out
Can move from one volume to another easily.	need batteries or plug
Many special useful features	May not as comprehensive?
Can help to enhance more rapid, CBD-enhanced lexical learning, especially with these functions:	May be more complicated to use?
May be easier to use to teach & practice essential foreign language learning strategies (VLS).	Many students lack basic English book dictionary skills.
CBDs with Word Challenge Games can be used to assess and practice at various difficulty levels.	Accessing in another language and alphabet can take much time which interprets learner's train of thought & memory.
Rapid bilingual access seems best for many LEPs	Advanced learners can handle easier monolingual dictionary.
Archiving is often automatic. Various types exist.	
Some have word origin, grammar/parts of speech & pronunciation notes, with many examples. Not all.	Word backgrounds and meanings may be more complete in books.
Computers can help learners to learn by related groups of words by using Jump & Memo functions.	
Active practice can be done right away using Memos/Word Search Histories of each student alone or in groups.	
Anchoring into long-term memory is encouraged by referring back to memos & adding own notes to them.	One often looks up same words in books over and over before remembering them. No clear way to review or recall them.
Use of CAI/CALL is often found to be more interesting & motivating to students, even more-so for non-English majors.	
Easy to use CBDs for Recycling or Reviewing of new TLV (Target Language Vocabulary).	
Can test oneself using either word searches/memos, or with some having Word Challenge Games.	Reassessing is hard with books.
Learners can *Re-meet for Relearning* those words not yet remembered by repeating this cycle again.	Use of book dictionaries often fails to adequately increase Exposure/Depth of processing of target language vocabulary.
Hot potatoes http://web.uvic.ca/hrd/hotpot	Shareware Test Creator
Oxford's Genie dictionary software	Instant access monolingual glossing with exercises
Web-based Vocab Profiler (Nation/Cobb's)	**http://www.er.ugam.ca/nobel/r21270/cgi-bin/webfreq**
CabSoftware	**http://www.cabsoft.com/ vocab.html**
Catch a Wave print & online youth magazine	Bi-weekly; 5,000 Yen per year. Full glossing provided.

in this writer's original studies (Loucky, 2002 a, b, & c). But this would probably depend more on each learner's initial English language and vocabulary levels and amount of prior exposure to computers rather than one's major. 3) Thirdly, foreign language learners with higher L2 vocabulary levels or language proficiency can be expected to not only use computerized tools more effectively, but also to learn new target language vocabulary more rapidly than students of lower vocabulary level or proficiency.

Future studies should explore how much more effective multi-functional CBDs are, such as those mentioned earlier which have "Word Search History," "Word Challenge Review Game," and similar educational functions built-in, as compared with those cheaper models that do not. Naturally students need to be trained in how to maximize the use of these functions to help improve their foreign language learning and vocabulary acquisition. While CALL software and CBDs (See recommendations in Table C: Comparative Computerized Bilingual Dictionary Chart for Japanese-Studying English; and Table D: Text to Speech/Speech to Text Programs) are extremely helpful for the Japanese context, students clearly need much more guidance in maximizing the application of each particular software, website or electronic device by learning how to use their various functions to help them at each stage of processing new words when using different essential lexical processing strategies as briefly outlined in the above taxonomy. Teachers and students need to become more familiar with the various features and functions available on each type of CALL software or dictionary, in order to make maximum use of them for enhancing all four communication skills, including comprehension as well as receptive and productive vocabulary skills to support more effective and enjoyable foreign language learning.

The following are helpful guidelines and goals to examine when seeking to combine new insights and innovations from CALL to the field of foreign language reading and vocabulary development. As Sokmen (1997, p. 257) advised, there are three main lexical areas most in need of further systematic research:

1) The first challenge is to systematize the vocabulary [teaching, learning and research] of English. . . . Once we know more about the system and the metalanguage to discuss it, teacher training programs will be better able to prepare L2 instructors to teach vocabulary in a principled and systematic way.

2) Secondly, more research on the effectiveness of methods of vocabulary instruction is necessary. Three crucial areas are semantic elaboration, ways to productively learn collocations and lexical phrases, and computer-assisted vocabulary activities.

3) Finally, we need to take advantage of the possibilities inherent in computer-assisted learning, especially hypertext linking, and create software which is based on sound principles of vocabulary acquisition theory. At present, a good deal of vocabulary software is decidedly lacking in variety of exercises and depth of processing. There is a need for programs which specialize on a useful corpus [such as EAP, technical or medical vocabulary], provide the expanded rehearsal, and engage the learner on deeper levels and in a variety of ways as they practise vocabulary. There is also the fairly unchartered world of the Internet as a source for meaningful vocabulary activities for the classroom and for the independent learner.

In light of the research findings, recommendations and conclusions from the software and websites examined above, a specific five-point plan can now be proposed to help advance research and better maximize foreign language vocabulary development. 1) First of all, software and websites that provide fully bilingualized help seem to be most effective and helpful, especially to learners with limited English proficiency (LEP). **Ideally, fully bilingualized computers, offering students immediate access to both L1 and L2 glosses and explanations along with both audio and visual helps seem to best promote language learning and retention.** Use of computerized bilingual dictionaries such as *Brother Tsuyaku,* Oxford's monolingual *Genie,* and *Rikai.com* should be examined when used systematically as shown.

2) Secondly, CALL Webmasters, teachers and publishers should seek to provide language learners with more low-intermediate level reading and listening materials, both on and offline. The use of Text-to-Speech should be further investigated, as well as other multimedia approaches, to help enhance reading comprehension and speed, as well as learners' enjoyment of language learning software and websites.

3) Teachers should encourage both deeper and more active lexical processing and use.

4) Teachers should also encourage multiple lookups, and systematic lexical processing via use of a simple, memorable framework, such as that outlined above, which includes these essential learning steps:

I. Assessing known versus unknown L2 vocabulary, using some kind of vocabulary evaluator or VKS. Use both student self-assessment of language input and teacher-assessment of output.

II. Accessing new TL vocabulary as rapidly as possible, with computerized assistance.

III. Archiving new terms — Students should be urged to record both new receptive understandings, and also to generate and record their own productive expressions whenever possible.

IV. Analyzing new words in various ways — by word parts, origins, and in different sets or groups.

V. Anchoring — new terms into short-term memory by using various mnemonic devices, especially when L1 words with similar sounds or shapes can help to build such "mental hooks, cues or triggers."

VI. Associate—by teaching them to systematically organize new TL vocabulary learning . Use a combination of structured approaches, such as the Semantic Field Keyword Approach, along with various individual and social learning styles, strategies and preferences to enhance learning and long-term retention. Encourage and demonstrate the use of various visual graphic organizers and representations, such as Concept Trees, Word Maps, and other Semantic Field grids, scales, and categories to help stimulate and strengthen LT memory.

VII. Activate new TL vocabulary — in both speaking and writing, both individually and socially.

VIII. Anticipate — help learners to build up their predictive skills by use of more cloze exercises, in both listening and reading, including the use of songs as well as prose.

IX. Reassess — Re-evaluate amount of TL vocabulary learned, comparing both receptive understanding and productive use gains.

X. Relearn by Systematic, Delayed Recall — Recycle and Review any words or phrases missed by carefully planned Repeated Encounters. Strengthen associative memory neural networks by building up both receptive and active memory traces, using both a) CAI/CALL multimedia assistance, and also b) Social communicative interactions. "Re-meet to Relearn" and Recycle or Revise again as often as needed, following the principles of systematic, delayed review to help maximize long-term retention and build up learners' automatic sight word recognition skills. The deeper new TL vocabulary is processed, across a wider variety of both receptive and productive contexts, the more learners' cognitive memory will be freed up for higher level critical and creative reading and reasoning skills.

5) Finally, since language learning is a combination of a) language acquisition, b) recognition, c) prediction, and d) production (Loucky, 1996), students need regular, systematic practice in each of these essential processing areas. Teachers should help learners to integrate their development of all four communication skills, both on- and offline, by prioritizing the most essential common core vocabulary, phrasal verbs, and collocations. A system for helping most learners of English to at least double their TL vocabulary using a computer-assisted, bilingual Semantic Field Keyword Approach can be found along with many useful links to essential high frequency vocabulary lists and profilers at the author's website http://**mx7.tiki.ne.jp/~jloucky/**). Teachers need to be able to scale their vocabulary learning activities from those that require easy and shallow processing for their lowest level students, to activities

that require deeper and more complex lexical processing for more advanced language learners.

Word Count: 7800

References:

ASK Chousokudou (Speedreading) CDs. (1999). Hybrid Training CDs. Tokyo: ASK, Inc.

Building Reading Comprehension. (1993). Queue, & Clearview, Inc. Mac Platform only. (800-232-2224)

Crow, J. (1986). *The keyword approach: Vocabulary for advanced reading comprehension.* [SFKA] Englewood Cliffs, NJ: Prentice-Hall Regents.

Estes, T.H., & Estes, J.J. (1989). Degrees of Reading Power as Virginia's Passport to Literacy. *Reading in Virginia,* Vol. XIV, Spring 1989, pp. 6-13.

Hartley Reading Skills Collection. (1995). San Diego, CA: Jostens Learning Corporation.

Loucky, J. P. (1996). *Developing and testing vocabulary training methods and materials for Japanese college students studying English as a foreign language.* Ed.D. Dissertation on file with Pensacola Christian College, Pensacola, FL. Also available either from ERIC Center for Applied Linguistics via fax to (202) 429- 9292; or from UMI Dissertation Services, 30 No. Zeeb Rd., PO Box 1346, Ann Arbor, MI 48106-1346. (http//www.umi.com).

_____. (1997). Summary of *"Developing and testing vocabulary training methods and materials for Japanese college students studying English as a foreign language." Annual Review of English Learning and Teaching,* No 2, JACET Kyushu-Okinawa Chapter. (9/30/97: 15-36).

_____ . (2002a). Comparing and using computerized bilingual dictionaries in Japan. *JALT CALL National Conference, Presentation Handout.*

_____. (2002b). Assessing the potential of computerised bilingual dictionaries for enhancing English vocabulary learning. In P. N. D. Lewis (Ed.), *The Changing Face of CALL: A Japanese Perspective* (pp. 123-138). Lisse, Holland: Swets and Zeitlinger.

_____. (2002c). Comparing translation software and OCR reading pens, On Swanson, M., McMurray, D., G Lane, K. (Eds.) Pan-Asian Conference 3 at 27th International Conference of JALT, National Conferences Proceedings CD, Kitakyushu, JAPAN. Pages 745-755.

_____. (2003). Assessing Computerized bilingual dictionaries Used in Japan. *ReCALL.* Forthcoming issue.

_____ . (Forthcoming). Comparing the effectiveness of various types of dictionaries for Japanese college students: Replication of Laufer and Hadar Study. In revision process.

_____ . (Forthcoming). *Designing an easily administered Vocabulary Knowledge Scale.* In revision.

Mizoguchi, S., Sano, M., Shiina, K., Thrasher, R., & Yoshioka, M. (1992). A proposal for the establishment of an EAP list and an analysis of its appropriateness. *JACET Bulletin 23:* 77-96.

Moore, R. *Shinbun, Shinbun;* and Shinbun Lite. Nagoya: Seibido.

Nation, I. S. P. (2001). *Learning vocabulary in another language.* Cambridge: Cambridge University Press.

O'Malley, J., & Chamot, A. (1990). *Learning strategies in second language acquisition.* Cambridge: Cambridge University Press.

Oxford, R. (1990). *Language development strategies: What every teacher should know.* NY: Newbury House.

Quigley, R. (1986). A Semantic Field [Keyword] Approach to passive vocabulary acquisition for advanced second language learners. MA Thesis at North Texas State under John Crow..

Reading Search: In Search of the Lost Folktales. (1995). Great Wave Software. L. A., CA.

Reading Skill Trainer. Sensei Group Reading Floppy Disc made by CAI Lab at Kanazawa Institute of Technology. Tokyo: Eichosha.

Rikai.com. http://www.rikai.com/cgi-bin/About.pl?Language=Ja
Todd Rudick's versatile translation website gives a variety of possible word for word translations, archives and links.

Sokmen, A. J. (1997). Current trends in teaching second language vocabulary. In Schmitt, N,, & M.

McCarthy (Eds.), *Vocabulary: Description, Acquisition, and Pedagogy.* Cambridge: Cambridge University Press. pp. 237-257.

The World and I: World Folktales--A 15 Year Collection. (2001). Hybrid CD from.

Vocabulary Drill. Developed by S. Wasson, Drexel University (PA). Available from Intellimation Library for the Macintosh. P.O. Box 1922, Santa Barbara, CA 93116-1922 (805-685-2100). Also from Zenkoku Daigaku Seikatsu Kyoudou Kumiai Rengoukai

Waring, R. (2001). The 'State Rating Task'--An alternative method of assessing receptive and productive vocabulary. *Immaculata* (Notre Dame Seishin University, Okayama).

Wordcraft and Crow's Semantic Field Keywords. (1996). Author-designed software on Mac Hypercard. Available from the author, were part of a dissertation comparing the use of CAI reading and vocabulary materials with Audio-Lingual and Sustained Silent Reading methods.

World Watch. 1997-. Hybrid CDs from e-World Watch, http://worldwatch.com.

Table C: Comparative Computerized Bilingual Dictionary Chart for Japanese-Studying English

CBD Name/Type SOFTWARE:	**Cost/Benefits**	**Features/Functions:**	**Advantages/Applications for Language Study**
Learnout & Houspie's Power Translator PRO7	$100 for English, Japanese & 5 European	Translate Full Sentences	Multilingual Use Interface Seamless Integration
Learnout & Houspie Easy Language 61 ("See, Hear, Say it")	$150 for 61 Languages, Pronounces 125,000 words/21,000 phrases	Voice Print Technology Interactive; Essential Vocabulary Focus	Interactive Learning Games; Multimedia Video Photo Tours
Universal Translator	$250 for full suite	Translates 40 Languages Text to Speech & Self-Read Voice Translation	Seamless Integration; Spell Check 35 Languages Poor quality for Japanese
Brother Tsuyaku	10,000 Yen	Full phrase translation ability	Excellent quality for reasonable price
Ditonic (East Joy)	About $50; Very rapid access	Uni-directionality, only English to Japanese	Enhanced grammar study of various word forms
MacJ Dictionary	Shareware	Rapid access English, Japanese, Korean	Rapid search functions
System Jisho (Mac)	System Shareware	Clear & User-friendly	Bi-directional searches
Pocket Transer : Mac/PC	20,000 Yen	Full Translation; Save & Print Functions	Excellent rapid access; archiving & printing
Atlas, V7	$450/Expensive	Limited English to Japanese only	
Unico Sura Sura Series	Pricy separate OCR & Translation Packs	6 Languages Available for OCR/Translation	
Honkaku Tsuyaku (Sourcenext)	5,500 Yen; Expensive Add-on Tech. Lexicons	Bidirectional with Voice Translation	
Soiku Hayawaza JET	14-20,000 Yen 2 Versions	Choice of 6 Technical Vocabulary Areas: Add-on ESP Lexicons Extra	High-speed translation (Ad: "Translates 14 pages in 29 seconds!")
Tsuyaku Ichiban (Souiku)	8,000 Yen	Uses Pocket Transer translation engine as its database	
Tsuyaku no Tetsujin	3,500 Yen	Uses Pocket Transer as its database (ASCII)	Disadvantage: EJ & JE are sold separately
Tsuyaku Pikaichi, V3	7,000 Yen	Bi-directional: Works in Office XP/2000, Word	Translates PowerPoint
Tsuyaku Office	6,000 Yen	Translates ME/95/98 or NT4/2000 Documents	
Tsuyaku Ohsama, V4	6,000 Yen	Internet/E-biz Aim: for All platforms/ Java	Works with Linux, Lotus Notes, etc.
Translator Korya 98 Ippatsu Tsuyaku & Loga Vista X	$200 Logo Vista OCR/ $100 Translator only. 8 Available Languages.	Reads Text to Speech, Translates Spoken or Written Input: 8-14 man	Translates most MS Office & 2000 Pro Documents as well as Websites/Email.
Quickionary Reading Pens	$2-250 US	OCR Handheld Scanner Very fast 1' CBD	L1 translation & L2 pronunciation capabilities
Eijiro	$4-500 US	Very fast	With sound
Ippatsu Tsuyaku	Comes w. some Fujitsu		
Rakuchin	Fujistsu system soft	Bi-directional	With sound

Bookshelf	Shareware; Must have CD to use	Several data bases	Word, grammar, people, proverbs, grammar
Portable Hand Held Devices:			
Cannon 300 PED	7,000 Yen	3 Archiving Functions	Idioms, Related Phrases
EZ-Word PED	4,000 Yen	No Archiving	
Seiko II PED	3,000 Yen		Limited English Meanings
Sony DD-S25	slower, easier to damage, most expensive	primarily useful for specialists (translators)	voice function has fairly good quality and is of limited value
Casio XD-S3000	many useful learning aids that a standard dictionary does not provide	Longman is a particularly helpful addition	good for students serious about English study
Casio XD-1500; Seiko 7200 & 8000	Some have Word Game programs such as Word Challenge at various levels for vocabulary practice.		These all look promising, particularly for English study
Free Online Translation:			
ALIS Gist in Time	http://www.alis.com/cgi-bin/transdemo.pl	10 Languages Available	Free Service
InterTran	http://www.tranexp.com:2000/InterTran		Free Service
Language Engineering Corporation	http://www.lec.com/demo/frame.html		Purchasing Fee
Amikai Web Translation Engine	http://www.amikai.com/	Used by various sites Can do 24 Language Pairs including URLs!	Free Service; Excellent quality for news, etc. Printable quality
AltaVista Babel Fish Translation	http://world.altavista.com/tr	Systran Internet World Keyboard	Free Text or Website Translation of 12 Languages
Eijiro	http://www.alc.co.jp/		
Excite Japan	http://www.excite.co.jp/world	Uses Amikai Engine	
@nifty Global	http://www.02.so-net.ne.jp/~suyama/	Uses Amikai Engine	
Cafeglobe	Cafeglobe.com/café/wotg/index.html	Requires Members	Website Translation
Rikai.com (Great for News)	http://rikai.com/cgi-bin/HomePage.pl?Language=Ja	Single word choices	Trilingual Reading Development (Archives)
Babylon	http://www.babylon.com/		
Monolingual Sites:		Best for Advanced Language Learners	(Those beyond Minimum Threshold Level, Laufer)
Oxford English Dictionary	http://www.oed.com/public/welcome/		
Merriam- Webster	http://merriamwebster.com		
The American Heritage Dictionary	http://www.bartleby.com/61/		
Specialized Dictionaries:			
Semantic Rhyming Dictionary	http://www.rhymezone.com/		
Signals: A Dictionary of Communicative Expressions	http://www.eco.mhon-u.ac.jp/~natusch/index.htm		
Contact Author at:	**Website: http://**mx7.tiki.ne.jp/~jloucky/	For collaboration, questions, articles	Email: jploucky@mx22.tiki.ne.jp Call/Fax: (093-583-5748)

Table D: Text to Speech/Speech to Text Programs:

Dragon	**http://dragontalk.com./index.html**		
iSpeak	**http://www/acivpoce/cp./products/ispeak/**	$70 from site; Can create MP3 files with speech	Reads any text and emails
Magooli			
MBROLA (Belgian-based)	**http://tcts.fpms.ac.be/synthesis/mbrola.html**	Multiple languages; Free	Over 20 platforms
Microsoft	**http://www.microsoft.com**		
Speakeasy	**http://members.ncbi.com/computerwise/ speakeasy/index.htm**	Microsoft made; READS KANJI JAPANESE!	Free Download; Requires Copy & Paste to work
32 Other Sites! Software for Speech Production	**http://dmoz.org/Computers/ Speech_Technology/Speech_Synthesis/**	Some for specific languages	Most for PCs

Table E: Maximizing Acquisition of All Four Communication Skills with the Help of Modern Computerized Technology

CAELL/IT EFL GOAL: to use Internet & Integrated Four Skills Software more effectively and enjoyably to Maximize English Language Skills & Vocabulary Development.

LISTENING: Use Cloze with Video & Audio/Music for Prediction Level Tasks; Process Larger "Chunks"

1. Preparing/Previewing Lessons
2. Processing Language; Move to
3. Producing Aural Language Comprehension/Communication

Access, Analyze & Assess AURAL COMMUNICATION MEANINGS:
Of Speech, Poetry, Song/Video Input.

Research: CD Song Cloze Listening Tasks; CDR Karaoke Club Approach Tasks Processing Aural Input. USE:
OCR Text-to-Speech for Listening Enhancement while Reading. AV Online MVDP Gilbert & Matsuno Also Use Video-Based Approaches. Test Song-based & Text-to-Speech Approaches for Reading-Listening.

READING: Move from Recognition Level Tasks to More Analytic Level

1. Build up gradually from Literal & Familiar Levels
2. To More Complex Structure, Syntax, Semantics/Strategies
3. Reading Comprehension Skills
4. Increase Flexibility, Speed & Accuracy via CBD Use
5. Vary Speed with Reading Purpose /Genre; Reading Skills Collection
6. Use Rikai.com Instant Glossing

PROCESS MEANING OF WRITTEN TEXTS & Develop Sense Reading by Pacing Machine/Computerized Skill Builders Research: Use of Text-to-Speech Software such as World Watch Simultaneous Reading-Listening Software to Increase Learning; Computer Bilingual Dictionaries, eg Quickionary Reading Assistant with Pronunciation & Translation.
Use Vocab Profiler & SFKA Online

SPEAKING: Focus on Actual, Authentic Language Acquisition Tasks/Production

1. Basic Daily Vocabulary (Punchline)
2. Essential Idioms (PHR, Dixson)
3. Conversations Corrected (Seibido)
4. Strategies in Speaking (Rost, Longman)
5. Longs Gambits for Cross-Cultural "Strategic Interaction Approach"

Research: Speech-to-Text Software for Analyzing, Assessing & Correcting Speech and Grammar Input.

Active, Productive Use Vocabulary vs. Recognition/Receptive Vocabulary

Experiment with Dragon-Inputted Speech/Translation Software with Goal of Native-Like Pronunciation & Proficiency

WRITING: Balance Process with Product Approaches for More Rapid and Balanced L2 Acquisition. Focus on Developing and Polishing Active Production via Use of Expressive Skills.

1. Simulate L1 Writing Process with Real Comm. Tasks; E-Mails, Instant Messaging
2. Produce Authentic Written Communication
3. Peer Evaluation and Sharing in Editing and Revising. Chatting/Shared Browsers Used
4. Polish Writing for Printing or Publication
5. Add Graphics or Media such as Clip/Photo/ Video Art; Develop Various Keyboarding Computer Skills.
6. Use E-Beam to transmit Class Collaborated, Illustrated Lessons from Whiteboard to Virtual Classrooms to Archive

Research: Sample Texts & Software:
Azar; Star Write; Share Your Paragraph
Bilingual Dictionaries; CAI; E-Mail Correction
Creative Vocabulary Stories; Spell/Grammar Checkers; OCR;
On-line (Dictionaries); Process Your Thoughts Software, etc.
CBD-Assisted Writing Using
Universal & Brother Translation Software, etc.

EL027866

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Enhancing Japanese College Students' English Reading & Vocabulary Skills by Using CALL Innovations

Author(s): John Paul Loucky

Corporate Source:

Publication Date: 7/2003

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE AND IN ELECTRONIC MEDIA FOR ERIC ARCHIVAL COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only.

The sample sticker shown below wil affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

Check here for Level 2B release, perr reproduction and dissemination in microfi

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires per from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of edu response to discrete inquiries.

Sign here please

Signature: John P. Loucky

Printed Name/Position/Title: Assoc. Professor

Organization/Address: Seinan Women's University

Telephone: 092-841-8004 (same) FAX:

E-Mail Address: jploucky@mx22.tiki.ne.jp

Date: 7/24/03

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the followin information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be sp Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS).

Publisher/Distributor:
Address:
Price Per Copy:
Quantity Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant a reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V.WHERE TO SEND THIS FORM:

You can send this form and your document to the ERIC Clearinghouse on Languages and Linguistics, which will forward your materials to the appropriate ER Clearinghouse.

Acquisitions Coordinator
ERIC Clearinghouse on Languages and Linguisitics
4646 40th Street NW
Washington, DC 20016-1859

(800) 276-9834/ (202) 362-0700
e-mail: eric@cal.org